UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6

In the Matter of:	). CERCLA Docket No. 06-04-10
	)
Clean Harbors, Inc., and Baton Rouge	) Proceeding Under Sections 104, 106
Disposal, LLC, Respondents.	) and 107 of the Comprehensive
	) Environmental Response, Compensation
Devil's Swamp Lake Site, East Baton	) and Liability Act
Rouge Parish, Louisiana	)

UNILATERAL ADMINISTRATIVE ORDER FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY

TABLE OF CONTENTS

I. JURISDICTION AND GENERAL PROVISIONS

1. This Unilateral Administrative Order for Remedial Investigation/Feasibility Study (Order) is being issued by the United States Environmental Protection Agency (EPA) to Respondents Clean Harbors, Inc., (Clean Harbors) and Baton Rouge Disposal, LLC. This Order directs Respondents to perform of a Remedial Investigation and Feasibility Study (RI/FS) concerning the Devil's Swamp Lake site (Site), located in East Baton Rouge Parish, Louisiana.

2. This Order is issued under the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, (CERCLA), 42 U.S.C. § 9606(a). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to the Regional Administrators by EPA Delegation Nos. 14-14-A (April 15, 1994) and 14-14-B (May 11, 1994). This authority was further redelegated by the Regional Administrator for Region 6 to the Director, Superfund Division, Region 6, by EPA Regional Delegation Nos. R6-14-14-A (April 2, 2002) and R6-14-14-B (June 8, 2001).

II. PARTIES BOUND

3. This Order shall apply to and be binding on the Respondents and their successors and assigns. Respondents are jointly and severally responsible for carrying out all actions required of them by this Order. Any change in the ownership or corporate status of Respondents, including, but not limited to, any transfer of assets or real or personal property shall not affect Respondents' responsibilities under this Order.

III. DEFINITIONS

4. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have such meanings. Whenever terms listed below are used in this Order or in the appendices attached hereto and incorporated herein, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. §§ 9601, *et seq.*

b. The term "day" shall mean a calendar day. In computing any period of time under this Order, where the last day falls on a Saturday, Sunday or federal holiday, the period shall run until the close of business of the next working day.

c. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

d. The term "Facility" shall mean the Site as defined below and:

(1) any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock or aircraft, or

(2) any site or area where a hazardous substance has been deposited, stored, disposed of, or placed or otherwise come to be located but does not include any consumer product in consumer use or any vessel.

e. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

f. "Lake" shall mean Devil's Swamp Lake.

g. "LDEQ" shall mean the Louisiana Department of Environmental Quality and any successor departments or agencies of the State of Louisiana.

h. "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605 and codified at 40 C.F.R. Part 300.

i. "Order" shall mean this Unilateral Administrative Order for Remedial Investigation/Feasibility Study and all appendices attached hereto. In the event of conflict between this Order and any attachment, this Order shall control.

j. The term "Paragraph" shall mean a portion of this Order identified by an Arabic numeral.

k. "Parties" shall mean EPA and Respondents.

l. "RCRA" shall mean the Solid Waste Disposal Act, as amended, 42 U. S. C. §§ 6901, *et seq.*

m. The term "Section" shall mean a portion of this Order identified by a Roman numeral.

n. The term "Site" shall mean the Devil's Swamp Lake Site located in East Baton Rouge Parish, Louisiana, as described in Paragraphs 6 and 7 and depicted on the diagram attached as Appendix B.

o. The term "State" shall mean the State of Louisiana.

p. "Statement of Work" or SOW shall mean the Statement of Work for development of a RI/FS for the Site, as set forth in Appendix A to this Order. The Statement of Work is incorporated into this Order and is an enforceable part of this Order as are any modifications made thereto in accordance with this Order.

q. "Waste Material" shall mean (1) any "hazardous substance" as defined by Section 101(14) of CERCLA,42 U.S.C. § 9601(14), (2) any "pollutant or contaminant" as defined by Section 101(33) of CERCLA, 42 U.S.C. § 9601(33), and (3) any "solid waste" as defined by Section 1004(27) of the Solid Waste Disposal Act, 42 U.S.C. § 6903(27).

r. The term "Work" shall mean all activities the Respondent is required to perform under this Order, except those required by Section XIX (Retention of Records).

IV. FINDINGS OF FACT

5. Devil's Swamp is a large flood plain area which consists of Devil's Swamp, the Lake, Bayou Baton Rouge and surrounding properties near Scotlandville, East Baton Rouge

6. The Site is generally bordered by the northern portions of Bayou Baton Rouge to the north, U.S. Highway 61 - (Scenic Highway), the Ewell Swamp farm, Baton Rouge Disposal, LLC, [previously owned and operated by Safety-Kleen (Baton Rouge), Inc., formerly known as Laidlaw Environmental Services (Baton Rouge), Inc., (Laidlaw) formerly known as Rollins Environmental Services (LA), Inc., (Rollins)], the Baton Rouge barge harbor to the east and the Mississippi River to the south and west. The Site consists of contaminated sediments within the Lake, a portion of Devil's Swamp adjoining the Lake and associated wetlands.

7. The Lake was excavated in 1973 and is surrounded by low-lying bottom lands that grade into the swamp toward the Mississippi river. The Lake is subject to sheet flow from Bayou Baton Rouge through Devil's Swamp, discharges and storm water runoff from the former Rollins property, storm water runoffs from the Baton Rouge Port Commission property and other nearby industrial properties. The Lake is also subject to seasonal backwater flooding of the Mississippi River. In the past wastewater effluent was discharged from the former Rollins facility to the Lake.

8. The Site does not include releases from the existing Petro Processors of Louisiana, Inc., NPL site (LAD057482713) located in the Devil's Swamp watershed. Releases from the Petro Processors site are being remediated pursuant to a Consent Decree entered in *United States v. Petro Processors of Louisiana, Inc., et al.*, Civil Action No. 80-358.B (M. D. La.) on February 16, 1984.

9. LDEQ investigations in 1985 and 1986 along the Lake and the drainage ditch from the former Rollins facility to the Rollins outfall determined that polychlorinated biphenyls (PCBs) were present in the drainage ditch and Lake sediments. Joint LDEQ/EPA investigations conducted in 1994 confirmed the accumulation of PCBs within Lake sediments. Investigations conducted by predecessors in title to Baton Rouge Disposal, LLC, also confirmed the presence of PCBs in the drainage ditch, an area which has been the subject of RCRA corrective action remediation. In October, 2004, EPA and the United States Geological Survey collected sediment samples from the Lake as part of an immunoassay screening of sediment cores for PCBs. The investigation determined that PCBs had been deposited in Lake sediments since the mid-1970s. EPA performed an aerial photographic analysis of the Site in December, 2004. EPA's project report covered a twenty-year period from 1968 to 1988 and noted drainage pathways from the former Rollins site into the drainage ditch that discharges into the Lake. The report identified culverts, breaches, stains, standing liquids, spillage and other evidence of runoff from the former Rollins facility.

10. Elements and compounds, defined as hazardous substances in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), and 40 C.F.R. § 302 have been found at the Site. A 1999 report, "Human Health Risk Assessment Devil's Swamp, Baton Rouge, Louisiana," stated that PCBs had been found at levels of concern in sediments, fish and crawfish in the Lake and areas southward to the Mississippi River. EPA's acceptable risk range for PCBs is exceeded in the Lake area, and these exceedences of Reasonable Maximum Exposure (RME) cancer risks are due almost exclusively to the presence of PCBs in edible fish and crawfish tissues. The RME non-cancer hazards also exceed EPA's acceptable hazard goal of less than 1. Over the entire Devil's Swamp area, several chemicals of potential concern were identified using a risk-based screening concentration process which incorporated very conservative exposure and toxicity assumptions. These included chlorinated benzenes, PCBs and pesticides. A distinct gradient indicates chlorinated benzenes are associated with the Petro site and have been addressed at that site. PCBs have been found in the Lake which is a separate and distinct area within Devil's Swamp. The few occurrences of pesticides are not related to any particular contamination gradient and are believed to be representative of anthropogenic background levels.

11. Exposure to the substances identified in Paragraph 10 can result in acute and chronic toxicity to certain sediment-dwelling organisms. Exposure of benthic organisms to these compounds in sediment can adversely affect their survival, growth and reproduction. Toxicity tests for percent survival have been conducted on selected species of aquatic life. The survival rates of these aquatic species indicate the presence of toxic sediments for those species in the Lake.

12. PCBs released into aquatic ecosystems pose a number of potential risks to aquatic and terrestrial organisms. The primary concerns associated with PCBs are effects on survival, growth and reproduction from long-term exposures. Similarly, exposure to sediment-associated PCBs can adversely affect the survival, growth and reproduction of benthic invertebrates and, potentially, benthic fish species. The accumulation of PCBs in the tissues of aquatic organisms

can adversely affect the survival, growth and reproduction of aquatic-dependent avian and mammalian wildlife species (i.e., those species that consume aquatic invertebrates and/or fish).

13. Respondent Clean Harbors was incorporated in Massachusetts on February 27, 1987, and presently operates as a Massachusetts corporation.

14. In June, 2000, Safety-Kleen (Baton Rouge), Inc., a subsidiary of Safety-Kleen Corporation (Safety-Kleen), owned and operated the former Rollins facility. The facility had been owned and operated as a hazardous and non-hazardous waste treatment, storage and disposal facility (former Rollins TSD facility), since the 1970s when it was owned and operated by Rollins. Thereafter, it was owned and operated in succession by Laidlaw and Safety-Kleen. The former Rollins TSD facility was the source of the PCB contamination described in Paragraphs 9 and 10.

15. On June 9, 2000, Safety-Kleen Services, Inc., and certain of its affiliates and subsidiaries, including Safety-Kleen (Baton Rouge), Inc., filed voluntary petitions in the United States Bankruptcy Court for the District of Delaware for relief under Chapter 11 of the Bankruptcy Code.

16. On February 22, 2002, Safety-Kleen and certain of its subsidiaries and affiliates, including Safety-Kleen (Baton Rouge), Inc., the owner and operator of the former Rollins TSD facility, entered into an Acquisition Agreement with Respondent Clean Harbors whereby, subject to court approval, Clean Harbors, defined as "Purchaser" under the Acquisition Agreement, and certain subsidiaries of Clean Harbors, defined as "Purchasing Subs" under the Acquisition Agreement, agreed to purchase certain assets of Safety-Kleen's Chemical Services Division. Clean Harbors further agreed that, at closing, Clean Harbors, as "Purchaser," and its "Purchasing Subs" would assume the liabilities, including CERCLA liabilities, arising out of or relating to the ownership, possession or use of the Safety-Kleen assets and the operation of the waste treatment, storage and disposal business of the assets, whether such liabilities arose before closing or would arise after the closing date of the Acquisition Agreement. "Purchasing Subs" was defined in the Acquisition Agreement as "the direct and indirect subsidiaries of the Purchaser which either now exist or will be formed by the Purchaser prior to the Closing to acquire a portion of the Acquired Assets or Interest." Among the "Acquired Assets" to be purchased by Clean Harbors was the former Rollins TSD facility.

17. On May 1, 2002, Respondent Baton Rouge Disposal, LLC, was incorporated in Delaware as a limited liability company and presently operates as a Delaware corporation.

18. On June 18, 2002, the court approved the Acquisition Agreement.

19. The Acquisition Agreement closed on September 7, 2002. On that date Respondent Clean Harbors, as the "Purchaser," and Respondent Baton Rouge Disposal, LLC, as one of the "Purchasing Subs," assumed the CERCLA liabilities arising from and relating to the ownership

and operation of the former Rollins TSD facility, including Rollins' liabilities under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), as an owner and operator of the facility and an arranger of the disposal of hazardous substances owned or possessed by Rollins or other entities.

20. On October 10, 2002, pursuant to the Acquisition Agreement, Safety-Kleen (Baton Rouge), Inc., sold and conveyed the former Rollins TSD facility to Respondent Baton Rouge Disposal, LLC.

21. Respondent Baton Rouge Disposal, LLC, is the current owner of the former Rollins TSD facility and certain parts of the Site. The property consists of 17 tracts comprised of the former Rollins TSD facility and off-site tracts, including land which underlies part of the Lake and is part of the Site.

22. On December 1, 2003, EPA issued a General Notice Letter to Clean Harbors Baton Rouge, LLC, the owner and operator of the equipment and assets located at the former Rollins TSD facility, notifying that entity of the potential liability that it had incurred or may have incurred with respect to the Site.

23. On April 26, 2005, EPA issued a Special Notice Letter to Clean Harbors Baton Rouge, LLC, advising that, based on information developed during its investigation of the disposal of hazardous substances at the Site, EPA had identified that entity as a potentially responsible party.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, EPA has determined that:

24. Respondent Clean Harbors is a Massachusetts corporation and a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

25. Respondent Baton Rouge Disposal, LLC, is a Delaware corporation and a "person" as defined by Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

26. The Site is a "facility" as defined by Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

27. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" under Section 104(a)(1)(A), 42 U.S.C. § 9604(a)(1)(A), as that term is defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14), or includes a "pollutant or contaminant which may present an imminent and substantial danger to public health or welfare" under Section 104(a)(1)(B) of CERCLA.

28. The conditions described in Paragraphs 9 and 10 constitute a "release" of hazardous substances from the former Rollins TSD facility, as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

29. The presence of hazardous substances at the Site or the past, present or potential migration of hazardous substances currently located at or emanating from the Site constitute actual and/or threatened "releases" as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

30. Respondent Baton Rouge Disposal, LLC, is the "owner and operator" of the Facility as that term is defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).

31. Respondents are responsible and liable parties under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), with respect to the costs and damages described in Section 107(a)(4)(A)-(D) of CERCLA, 42 U.S.C. § 9607(a)(4)(A)-(D).

32. The remedial investigation and the feasibility study required by this Order are necessary to abate an imminent and substantial endangerment to the public health or welfare or the environment because of an actual or threatened release of hazardous substances at or from the Site and are not inconsistent with the NCP or CERCLA.

VI. ORDER

33. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions, all documents attached hereto incorporated by reference into this Order and all schedules and deadlines in this Order or in documents incorporated by reference into this Order.

VII. NOTICE OF INTENT TO COMPLY

34. Not later than 14 days after the effective date of this Order Respondents shall provide written notice to EPA stating whether they will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the Work as provided by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, based on facts which exist as of the issuance date of this Order, any "sufficient cause" defenses asserted by Respondents under Sections 106(b) and 107(c)(3) of CERCLA, 42 U.S.C. §§ 9606(b) and 9607(c)(3). The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be an acceptance of Respondents' assertions.

VIII. WORK TO BE PERFORMED

35. All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within 30 calendar days of the effective date of this Order and before the Work outlined below begins, Respondents shall notify EPA in writing of the names, titles and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such Work. With respect to any proposed contractor, Respondents shall demonstrate that the contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001, or subsequently issued guidance) or equivalent documentation as determined by EPA. Within 30 calendar days following Respondents' submission of the personnel information EPA will determine whether to approve the proposed personnel.

36. EPA will review Respondents' selection of a Project Coordinator as provided in Paragraph 63. During the course of the RI/FS, Respondents shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

37. Respondents shall perform the RI/FS in accordance with the provisions of this Order, the attached SOW, CERCLA, the NCP and EPA guidance, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988, or subsequently issued guidance), the "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance) and guidance referenced therein and guidance referenced in the SOW, as may be amended or modified by EPA.

38. The Remedial Investigation shall consist of collecting data to characterize site conditions, determining the nature and extent of the contamination at and from the Site, assessing risk to human health and the environment and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered.

39. The Feasibility Study shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP and shall include remedial actions that utilize permanent

solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives Respondents shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

40. Upon request by EPA, Respondents shall submit in electronic form all portions of any plan, report or other deliverable Respondents are required to submit pursuant to provisions of this Order. All work performed under this Order shall be in accordance with the schedules herein and in full accordance with the schedules, standards, specifications and other requirements of the Work Plans, as initially approved by EPA and as they may be amended or modified by EPA.

41. EPA reserves the right to comment on, modify and direct changes for all deliverables. Respondents must fully correct all deficiencies and incorporate and integrate all information and comments provided by EPA, either in subsequent or resubmitted deliverables.

42. Respondents shall not proceed further with any activities or tasks until receiving EPA approval of the RI/FS Work Plans. While EPA approval is pending, Respondents shall proceed with all other tasks and activities which may be performed independently of these deliverables in accordance with the schedule set forth in this Order. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

43. In the event that Respondents amend or revise a report, plan or other submittal upon receipt of EPA comments, if EPA in its discretion subsequently disapproves of the revised submittal or any portion thereof or if subsequent submittals do not fully reflect EPA's directions for changes related to performance of the RI/FS, EPA retains the right in its sole discretion to seek statutory penalties, perform its own studies, complete the RI/FS (or any portion of the RI/FS) under CERCLA and the NCP and seek reimbursement from Respondents and/or other potentially responsible parties for its costs and/or seek any other appropriate relief.

44. In the event that EPA takes over some of the tasks, but not the preparation of the RI and FS reports, Respondents shall incorporate and integrate information provided by EPA into the final RI and FS reports.

45. The failure of EPA to either expressly approve, disapprove or comment on Respondents' submissions within a specified time period shall not be construed as approval by EPA.

46. Respondents shall assure that all work performed, samples taken and analyses performed conform to the requirements of the RI/FS Work Plans, the EPA-approved QAPP and guidance identified therein. Respondents shall assure that field personnel utilized by

Respondents are properly trained in the use of field equipment and in chain of custody procedures.

47. Prior to any shipment of hazardous substances from the Site to an out-of-State waste management facility, Respondents shall provide written notification of the shipment to the appropriate state environmental official in the receiving state and EPA's Project Coordinator. This notification requirement does not apply to such off-Site shipments where the total volume of such shipments will not exceed 10 cubic yards.

48. The notification shall be in writing and shall include the following information, where available: (a) the name and location of the facility to which the hazardous substances are to be shipped, (b) the type and quantity of the hazardous substances to be shipped, (c) the expected schedule for the shipment of the hazardous substances and (d) the method of transportation. The identity of the receiving facility and state to which any hazardous substances from the Site will be shipped will be determined by Respondents following the award of the contract for the RI/FS. Respondents shall provide all relevant information, including information noted in (a)-(d) in this Paragraph regarding the off-Site shipments as soon as practical after the award of the contract and before the hazardous substances are shipped. Respondents shall notify the receiving state of major changes in the shipment plan, such as a decision to ship the hazardous substances to another facility within the same state or to a facility in another state.

IX. NOTIFICATION AND REPORTING REQUIREMENTS

49. All reports and other documents submitted by Respondents to EPA (other than the monthly progress reports referred to below) which purport to document Respondents' compliance with the terms of this Order shall be signed by a responsible corporate official of one or both of the Respondents or by the Project Coordinator who has been so authorized by Respondents whose qualifications are determined by EPA to be acceptable, pursuant to Paragraph 63 of this Order. The Project Coordinator shall provide a certification to EPA that he has been fully authorized by Respondents to submit such a document and to legally bind all Respondents thereto. Notwithstanding such a delegation of authority to the Project Coordinator, Respondents shall remain responsible and liable for the proper performance of the work required by this Order. For purposes of this Order, a responsible corporate official is an official who is in charge of a principal business function.

50. Until the termination of this Order, Respondents shall provide EPA with written monthly progress reports which include descriptions of (a) the activities performed during the reporting period to meet the requirements of this Order, (b) the results of all sampling, tests, modeling and all other data (including raw data) received or generated by or on behalf of Respondents during the reporting period in the implementation of the work required by this Order, (c) all actions, data and plans which are scheduled for the next two months and provide other information relating to the progress of work as is customary in the industry and (d) the percentage of completion, all delays encountered or anticipated which may affect the schedule

for completion of future work and efforts to mitigate those delays or anticipated delays. The progress reports shall be submitted to EPA by the 15th day of every month following the effective date of this Order.

51. All work plans, reports, notices and other documents required to be submitted to EPA under this Order shall be sent by certified mail, return receipt requested, by overnight delivery or by courier to the following addressees:

Mr. Bartolome J. Cañellas, Remedial Project Manager
U.S. Environmental Protection Agency, Region 6
Superfund Division (6SF-RA)
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

52. Respondents shall give EPA at least 14 days advance notice of all field work or field activities to be performed by Respondents pursuant to this Order.

X. EMERGENCY RESPONSE AND NOTIFICATION OF RELEASES

53. Upon the occurrence of any event during performance of the work required under this Order which, pursuant to Section 103 of CERCLA, 42 U.S.C. § 9603, requires reporting to the National Response Center, Respondents shall immediately orally notify the EPA Project Coordinator (or, in the event of the unavailability of the EPA Project Coordinator, the Branch Chief of the Response and Prevention Branch of EPA Region VI) in addition to the reporting required by Section 103. Within 14 days of the onset of such an event, Respondents shall also provide EPA with a written report setting forth the events which occurred and the measures taken and to be taken in response thereto. The reporting requirements of this Paragraph are in addition to, not in lieu of, reporting requirements under Section 103 of CERCLA, 42 U.S.C. § 9603, and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

54. In the event of any action or occurrence during Respondents' performance of the requirements of this Order which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate or minimize the threat and shall immediately notify EPA as provided in Paragraph 53. Respondents shall take such action in accordance with applicable provisions of this Order including, but not limited to, the Health and Safety Plan. In the event that EPA determines that (a) the activities performed pursuant to this Order, (b) significant changes in conditions at the Site or (c) emergency circumstances occurring at the Site pose a threat to human health or the environment, EPA may direct Respondents to stop further implementation of any actions pursuant to this Order or to take other and further actions reasonably necessary to abate the threat.

55. Nothing in the Paragraph 54 shall be deemed to limit any authority of the United States to take, direct or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at or from the Site.

XI. MODIFICATION OF WORK PLANS

56. If at any time during the RI/FS process, Respondents identify a need for additional data, a memorandum documenting the need for additional data shall be submitted to the EPA Project Coordinator within 20 days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondents and whether it will be incorporated into reports and deliverables.

57. In addition to the authorities in the NCP, in the event that EPA determines that unanticipated or changed circumstances at the Site or conditions posing an immediate threat to human health or welfare or the environment warrant changes in the RI/FS Work Plans, EPA will modify or amend or direct Respondents to modify or amend the RI/FS Work Plans accordingly. Respondents shall implement the RI/FS Work Plans as modified or amended.

58. EPA may determine that in addition to tasks defined in the approved RI/FS Work Plans, other additional work may be necessary to accomplish the objectives of the RI/FS. EPA may require, pursuant to this Order, that the Respondents perform these response actions in addition to those required by the RI/FS Work Plans, including any approved modifications, if EPA determines that such actions are necessary for a complete RI/FS. Respondents shall implement the additional tasks which EPA determines are necessary. The additional work shall be completed according to the standards, specifications and schedule set forth or approved by EPA in written modifications to the RI/FS Work Plans or written Work Plan supplements. EPA reserves the right to conduct the work itself at any point, to seek reimbursement for the costs associated with the work from Respondents and/or to seek any other appropriate relief.

XII. RI AND FS REPORTS, ADMINISTRATIVE RECORD

59. EPA retains the responsibility for the release to the public of the RI and FS reports. EPA retains responsibility for the preparation and release to the public of the proposed remedial action plan and record of decision in accordance with CERCLA and the NCP.

60. EPA will provide Respondents with the final RI and FS reports, proposed remedial action plan and record of decision.

61. EPA will assemble the administrative record file for selection of the remedial action. Respondents shall submit to EPA documents developed during the course of the RI/FS upon which selection of the remedial action may be based. Respondents shall provide copies of plans, task memoranda including documentation of field modifications, recommendations for further

action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports and other reports. Respondents shall additionally submit any records of communications between Respondents and state, local or other federal authorities concerning the implementation of this Order or selection of the response action.

XIII. PROJECT COORDINATORS

62. EPA has designated Bartolome J. Cañellas as the Project Coordinator for the Site.

63. Not later than 14 days after the effective date of this Order, Respondents shall select their Project Coordinator and notify EPA in writing of the name, address, qualifications, job title and telephone number of that Project Coordinator. He or she shall have technical expertise sufficient to adequately oversee all aspects of the work contemplated by this Order. To the greatest extent possible, the Project Coordinator shall be present on Site or readily available during Site Work. EPA retains the right to disapprove of the Project Coordinator designated by Respondents. If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number and qualifications within 10 days following EPA's disapproval.

64. Respondents' and EPA's Project Coordinators shall be responsible for overseeing the implementation of this Order and shall coordinate communications between EPA and Respondents. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Order shall constitute receipt by Respondents. EPA and Respondents may change their respective Project Coordinators. Such a change shall be accomplished by notifying the other parties in writing at least 10 days prior to the change, where possible, and concurrently with the change or as soon thereafter as possible in the event that advance notification is not possible.

65. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager and On-Scene Coordinator by the NCP. In addition, EPA's Project Coordinator shall have the authority, consistent with the NCP, to halt any work required by this Order and to take any necessary response action when he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Order shall not be cause for the stoppage or delay of work.

66. All activities required of Respondents under the terms of this Order shall be performed only by qualified persons possessing all necessary permits, licenses and other authorizations required by applicable law.

XIV. OVERSIGHT

67. During the implementation of the requirements of this Order, Respondents and their contractors and subcontractors shall be available for such conferences and inspections with EPA as EPA may determine are necessary for EPA to adequately oversee the work being carried out and/or to be carried out.

68. Respondents and their employees, agents, contractors, representatives and consultants shall cooperate with EPA in its efforts to oversee Respondents' implementation of this Order.

XV. SAMPLING

69. All sampling and analyses performed pursuant to this Order shall conform to EPA direction and approval regarding sampling, quality assurance/quality control (QA/QC), data validation, and chain of custody procedures. Respondent shall ensure that the laboratory used to perform the analyses participates in a QA/QC program that complies with the appropriate EPA guidance. Respondent shall follow the following documents as appropriate as guidance for QA/QC and sampling: "Quality Assurance/Quality Control Guidance for Removal Activities: Sampling QA/QC Plan and Data Validation Procedures," OSWER Directive Number 9360.4-01; "Environmental Response Team Standard Operating Procedures," OSWER Directive Numbers 9360.4-02 through 9360.4-08.

70. Upon request by EPA, Respondent shall have such a laboratory analyze samples submitted by EPA for quality-assurance monitoring. Respondent shall provide to EPA the quality assurance/quality control procedures followed by all sampling teams and laboratories performing data collection and/or analysis. Respondent shall only use laboratories that have a documented quality system which complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditations Program (NELAP) as meeting the quality system requirements.

71. Upon request by EPA or its designated representatives, Respondents shall provide EPA or its designated representatives with duplicate and/or split samples of any material sampled in connection with the implementation of this Order or allow EPA or its designated representatives to take such duplicate or split samples.

XVI. ACCESS

72. If any area to which access is necessary to perform work under this Order is owned in whole or in part by parties other than Respondents, Respondents shall obtain or use their best efforts to obtain access agreements from the present owner within 30 days of the effective date of this Order. Such agreements shall provide access for EPA and their contractors, oversight officials and Respondents or their authorized representatives. Agreements for such access shall specify that Respondents are not EPA's representatives with respect to liability associated with Site activities. Copies of such agreements shall be provided to EPA upon request prior to Respondents' initiation of field activities. If access agreements are not obtained within the time referenced above, Respondents shall immediately notify EPA of their failure to obtain access. EPA may, in its sole discretion, obtain access for Respondents, perform those tasks or activities with EPA contractors or terminate this Order in the event that Respondents cannot obtain access agreements. In the event that EPA performs those tasks or activities with EPA contractors and does not terminate this Order, Respondents shall perform all other activities not requiring access to the subject property. Respondents additionally shall integrate the results of any such tasks undertaken by EPA into their reports and deliverables.

73. At all reasonable times EPA and its authorized representatives shall have the authority to enter and freely move about all property at the Site and off-Site areas where work is being performed for the purpose of inspecting conditions, activities, the results of activities, records, operating logs, contracts related to the Site or Respondents and their contractor relating to the Work, reviewing Respondents' progress in carrying out the terms of this Order, conducting tests as EPA or its authorized representatives deem necessary, using a camera, sound recording device or other documentary type equipment and verifying data submitted to EPA by Respondents. All parties with access to the Site under this paragraph shall comply with all approved health and safety plans.

XVII. INFORMATION AVAILABILITY

74. All information created, maintained or received by Respondents or theirs agents, contractors or consultants in connection with implementation of the Work, including, but not limited to, contractual documents, quality assurance memoranda, raw data, field notes, laboratory analytical reports, invoices, receipts, work orders and disposal records shall, without delay, be made available to EPA on request. EPA shall be permitted to copy all such documents and other items.

75. Respondents may assert a claim of business confidentiality under 40 C.F.R. § 2.203 covering part or all of the information submitted to EPA pursuant to the terms of this Order, provided such claim is allowed by Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7). Such a claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is

submitted to EPA, it may be made available to the public by EPA without further notice to Respondents.

76. Notwithstanding any other provision of this Order, EPA retains all of its information gathering, access and inspection authority under CERCLA, the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6991, and any other applicable statute or regulation.

XVIII. PERMITS

77. Respondents shall comply with all laws that are applicable when performing the RI/FS. No local, state or federal permit shall be required for any portion of the work, including studies, required hereunder which is conducted entirely on-Site where such work is carried out in compliance with Section 121 of CERCLA. However, Respondents must comply with the substantive requirements that would otherwise be included in such permits. For any work performed pursuant to this Order which is not "on-site", as defined in Sections 300.5 and 300.400(e) of the NCP, Respondents shall obtain all permits necessary under applicable laws and shall submit timely applications and requests for any such permits. This Order is not and does not purport to be a permit issued pursuant to any federal or state statute or regulation.

XIX. RETENTION OF RECORDS

78. All records and documents in Respondents' possession that relate in any way to the Site shall be preserved during the conduct of this Order and for a minimum of 10 years after completion of construction of any remedial action which is selected following the completion of the RI/FS. Respondents shall acquire and retain copies of all documents that relate to the Site and are in the possession of its employees, agents, accountants, contractors or attorneys. After this ten-year period Respondents shall notify EPA at least ninety (90) days before documents are scheduled for destruction. If EPA requests that the documents be retained, Respondents shall, at no cost to EPA, deliver the documents or copies of the documents to EPA.

XX. COMMUNITY RELATIONS

79. Respondents shall cooperate with EPA in providing information relating to the work required hereunder to the public. To the extent requested by EPA, Respondents shall participate in the preparation of all appropriate information disseminated to the public and make presentations at and participate in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site.

XXI. DELAY IN PERFORMANCE

80. Any delay in performance of this Order which in EPA's judgment is not justified by Respondents under the terms of this Section shall be considered a violation of this Order. Any

delay in the performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

81. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's Project Coordinator within forty-eight (48) hours after Respondents first become aware or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for the delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay and a schedule for implementing the measures that have been or will be taken to mitigate the effect of the delay. Increased costs or expenses associated with Respondents' performance of the activities required by this Order are not a justification for any delay in performance.

XXII. ABILITY TO COMPLETE WORK

82. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work. Within 90 days of the effective date of this Order, Respondents shall provide EPA with a performance bond, letter of credit, guarantee by a third party or company financial information reflecting that Respondents have sufficient assets available to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than the estimated cost of the RI/FS. If Respondents seek to demonstrate ability to complete the RI/FS by submitting company financial information or providing a third-party guarantee, Respondents shall resubmit such information each year on the anniversary of the effective date of this Order. If EPA determines that such financial information is inadequate, Respondents shall, within 30 days after receipt of EPA's notice of determination, provide additional financial assurances deemed sufficient by EPA.

83. At least seven days prior to commencing any work at the Site pursuant to this Order, Respondents shall submit a certification to EPA that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIII. UNITED STATES NOT LIABLE

84. By issuance of this Order neither EPA nor the United States assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors or consultants in carrying out any action or activity required by or performed pursuant o this Order.

Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors or consultants in carrying out any action or activity required by or performed pursuant to this Order.

XXIV. ENFORCEMENT AND RESERVATIONS

85. EPA reserves the right to bring an action against Respondents under Section 107 of CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States in connection with the Site. This reservation shall include but not be limited to past costs, future costs, direct costs, indirect costs, oversight costs and Interest as provided in Section 107(a) of CERCLA.

86. Notwithstanding any other provision of this Order, at any time during the RI/FS EPA may perform its own studies, complete the RI/FS (or any portion of the RI/FS), as provided in CERCLA and the NCP, and may seek reimbursement from Respondents for its costs or seek any other appropriate relief.

87. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional orders, and/or additional remedial or removal actions as EPA may deem necessary or from requiring Respondents in the future to perform additional activities pursuant to CERCLA or other applicable law.

88. Notwithstanding any provision of this Order, the United States retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations. The penalty amount is subject to possible further adjustments consistent with the Debt Collection and Improvement Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321 (1996), and the regulations promulgated thereunder, including the Civil Monetary Penalty Inflation Adjustment Rule, 69 Fed. Reg. 7121 (February 13, 2004), 40 C.F.R. Part 19. A failure to properly carry out response actions under this Order or any portion hereof without sufficient cause may result in liability under Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than three times, the amount of any costs incurred by EPA as a result of such failure to take proper action.

90. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site. Nothing herein shall constitute a finding that Respondents are the only responsible parties with respect to the release and threatened release of hazardous substances at or from the Site.

91. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order,

Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXV. EFFECTIVE DATE

92. This Order shall become effective on the 15th day after the signature date below.

XXVI. OPPORTUNITY TO CONFER

93. Within seven days after the receipt of this Order Respondents may request an informal conference with EPA to discuss the Order. If requested, the conference shall occur within seven days of Respondents' request.

94. The purpose and scope of the conference shall be limited to issues involving the implementation of the Work required by this Order and the extent to which Respondents intend to comply with this Order. The conference is not an evidentiary hearing and does not constitute a proceeding to challenge this Order. EPA's offering the opportunity to meet does not confer a right to challenge or seek review of this Order or to seek resolution of CERCLA liability. No stenographic record of the conference will be made.

95. Requests for a conference may be submitted to John Emerson, Assistant Regional Counsel, EPA Region 6, at (214) 665-3137, followed by a confirmation email to emerson.john@epa.gov.

XXVII. TERMINATION OF THE ORDER

96. This Order will be terminated by EPA, if Respondents demonstrate in writing and certify to the satisfaction of EPA that all Work and other activities required under this Order have been performed fully in accordance with the Order, and EPA has approved the certification in writing. Such an approval by EPA shall not relieve Respondents of any remaining obligations under the Order, including those requirements set forth in Section XIX regarding record retention. Respondents' written submission under this Paragraph shall include a sworn statement by a responsible official of the each Respondent which states, "I certify that the information contained in or accompanying this submission is true, accurate and complete."

It is so ordered.

U.S. Environmental Protection Agency

Samuel Coleman Date: 12/3/09

Samuel Coleman, P.E.
Director, Superfund Division

APPENDIX A

STATEMENT OF WORK

DEVIL'S SWAMP LAKE SITE
EAST BATON ROUGE PARISH, LOUISIANA

The Statement of Work (SOW) consists of this document and the following four attachments:

1. Summary of Major Submittals for the RI/FS
2. Quantity and Distribution of Draft and Final Deliverables
3. Regulation and Guidance Documents
4. Transmittal of Documents for Acceptance by EPA

1.0 Introduction

.0.1 Site Description

Devil's Swamp Lake (Lake) is located near Scotlandville Louisiana and the Baton Rouge Turning Basin in Section 47, Township 5 South, Range 1 West, and Sections 55 and 59 Township 6 South, Range 1 West . (U.S.G.S 7.5 - Minute Series Topographic Maps of Louisiana. Scotlandville, Louisiana 1963, photorevised. Walls, Louisiana, photo revised. Baton Rouge West, Louisiana, photorevised. Lobdell, Louisiana, photorevised). The site is a man-made oxbow shaped lake in an industrialized area near north Baton Rouge, Louisiana, and the Mississippi River.

The Lake was created in 1973 and is surrounded by low-lying bottom lands that grade into the swamp toward the Mississippi River. The Lake is subject to sheet flow from Bayou Baton Rouge through Devil's Swamp, discharges, stormwater runoff from the former Rollins Environmental property and stormwater runoff from the Baton Rouge Port Commission property and other nearby industrial properties. The Lake is also subject to seasonal backwater flooding of the Mississippi River. Wastewater is discharged from the former Rollins facility via outfalls 001 and 002 and flows in a generally west to southwesterly direction after exiting the property following the stream bed of an unnamed, intermittent tributary of the Lake.

Sediment sampling performed by the State of Louisiana in 1991 indicated the presence of anthropogenic chemicals at levels that could be considered typical for aquatic systems subject to non-point and point source surface and atmospheric inputs from an urban/industrial area. No pesticides or Polychlorinated Biphenyls (PCBs) were found above detection levels (0.010 ppm or 10 ppb) in 1980. Water samples and selected fish samples were analyzed, and results were unremarkable. More recent

studies conducted in 2004 by EPA and the United States Geological Survey found PCBs in Lake sediments at concentrations up to 15 mg/kg. PCBs have been found in the Lake since the 1970s.

A 1985 state inspection showed results which were quite similar to the 1980 samples in the types and amounts of compounds detected. A significant exception was the detection of PCBs at concentrations of up to 4 ppm in sediments from the northeastern end of the Lake most proximal to the entrance of the Rollins effluent outfall. Concentrations declined at greater distances from the outfall entry point. PCBs were also detected in sediment samples collected midway between the Lake and the former Rollins property.

Additional sampling was performed by the state throughout 1985 and 1986. Fish tissue samples showed PCBs concentrations that raised the concern of the State. In 1987 the Louisiana Department of Health and Hospitals (LDHH) recommended that the Louisiana Department of Environmental Quality (LDEQ) issue an advisory warning the public to limit the consumption of fish from that area. LDEQ posted the Lake with signs advising the public against swimming and limiting the consumption of fish and other aquatic organisms taken from the Lake. A fish consumption and swimming advisory, dated July 9, 1993, remains in effect for Devil's Swamp, the Lake and Bayou Baton Rouge. Substances of concern in the advisory are listed as Heaxachlorobenzene (HCB), Hexachlorobutadiene (HCBD), PCBs, lead, mercury and arsenic. Substances of concern for the Lake and immediately adjacent to the Lake are PCBs.

EPA inspected the Lake, Bayou Baton Rouge and Devil's Swamp in 1992 and 1993. A draft Ecological Screening Level Risk Assessment was completed in 1995. A Human Health Risk Assessment and Ecological Risk Assessments were completed in 1999. These assessments indicated unacceptable risks in the Lake and portions of the swamp north and south of the Lake. These assessments revealed that the majority of risks in the Lake area are related to PCBs as the main Contaminant Of Concern (COC). The State concurred with these findings and recommended that the site be listed on the National Priorities List (NPL) on March 18, 2003.The site was proposed for NPL listing in 2004.

.0.2 Purpose

The purpose of this SOW is to set forth the requirements for performing a Remedial Investigation/Feasibility Study (RI/FS) to select a remedy to eliminate, reduce and/or control risks to human health and the environment. This SOW is designed to provide the framework for performing the RI/FS activities at the Lake site. The goal is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and use the data in a Record of Decision (ROD) to be completed no later than September 30, 2012. The Remedial Investigation, risk assessments and Feasibility Study components should be completed on or before March 30, 2012. The SOW is to address the contamination specific to the Lake site

and not the unrelated contamination that extends into Devil's Swamp from the Petro/NPC site. The estimated completion date for this work is October 1, 2013.

.0.3 General Requirements

.0.3.1 Respondents shall perform the RI/FS in accordance with this SOW and all relevant guidance issued by EPA . The EPA Remedial Project Manager (RPM) is Bartolome J. Cañellas. He may be contacted at (214) 665-6662 and canellas.bart@epa.gov.

.0.3.2 A summary of the major deliverables and a suggested schedule for submittals is attached as Attachment 1. Respondents shall submit the major deliverables to EPA using the form attached as Attachment 4.

.0.3.3 The RI/FS involves the investigation and study of the horizontal and vertical extent of contamination and feasible remedies for PCBs contamination in the Lake site and adjoining swamp portions.

.0.3.4 Respondents shall furnish all necessary and appropriate personnel, materials and services needed for or incidental to performing and completing the RI/FS.

.0.3.5 A list of primary guidance and reference material is attached as Attachment 3. Respondents shall use the most recently issued guidance.

.0.3.6 The quantity and distribution order for deliverables is attached as Attachment 2.

.0.3.7 Respondents shall communicate at least weekly with the RPM, either in meetings or by telephone or email.

.0.3.8 Respondents shall communicate with the assigned EPA oversight contractor and, as appropriate, with the RPM present relating to performance of the RI/FS.

.0.3.9 Respondents shall document all decisions made in meetings and other discussions with EPA. Respondents shall forward the documentation to the RPM within five working days of the documented event.

.0.3.10 EPA will provide oversight of Respondents' performance of the RI/FS throughout the duration of the project. EPA review and approval of deliverables is a tool to assist the process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare and the environment. EPA will review deliverables to assess the likelihood that the RI/FS will achieve its goals and that its performance requirements have been met. Acceptance of deliverables by EPA does not relieve Respondents of their responsibility for the adequacy of the deliverables.

.0.4 Record-Keeping Requirements

Respondents shall maintain all technical records for the RI/FSt. Respondents shall submit paper and electronic copies of the RI/FS deliverable as specified in Attachment 2.

.0.5. Project Closeout

At the completion of the RI/FS work assignment, Respondents shall perform all necessary project closeout activities. These activities may include closing out any subcontracts, indexing and consolidating project records and files as required in Paragraph 0.4 above.

1.1 Project Planning and Support

The purpose of this task is to determine how the RI/FS will be managed and controlled. The following activities shall be performed as part of the project planning task:

.1.1 Project Planning

Initial Scoping and Planning Phase for RI/FS

.1.1.1 Attend Scoping Meeting

Before or concurrent with developing the Work Plan, Respondents and Respondents' contractor shall attend a scoping meeting to be held at the EPA Regional Office or, alternatively, at the administrative offices of Baton Rouge Disposal, LLC, located near the Site.

.1.1.2 Site Visit

Respondents shall conduct a site visit with Respondents' contractor and the RPM during the project planning phase to assist in developing a conceptual understanding of the RI/FS requirements for the site. Only the minimum essential personnel necessary to develop the individual Work Plan(s) will be authorized for a site visit. A list of Respondents' and Respondents' contractor's prospective personnel and their purpose in participating in the site visit shall be submitted to the RPM within 10 calendar days prior to the visit. Information gathered during the visit shall be used to better scope the project and help determine the extent of additional data necessary to implement the RI/FS. Respondents acknowledge that they are satisfied as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by EPA, as well as from the site file made a part of this work assignment.

Respondents' failure to take the actions described and acknowledged in this paragraph shall not relieve Respondents of their responsibility for properly estimating the time required and the cost of successfully carrying out the RI/FS.

Devil's Swamp consists of an approximate 12 square-mile backwater wetland along the east side of the Mississippi River. The Lake covers approximately 39 acres in the central portion of the swamp. Bayou Baton Rouge flows through Devil's Swamp en route to the Mississippi River. A portion of the Lake is the deepest water body when other areas of the swamp and bayou dry up during summer and fall and thus serves as a refuge for fish and other aquatic animals during these seasons. Access to the Lake is limited. Annual flooding of the swamp normally takes place in late winter and spring. During the RI/FS field activities Respondents should consider the use of amphibious type vehicles to gain access to the area under investigation. The use of boats and coordinating access and permits with other property owners will be Respondents' responsibility. The site visit during the planning phase may include and require an aerial inspection to identify areas of concern and develop a conceptual understanding of the impacted areas.

.1.1.3 Evaluate Existing Information

Respondents shall evaluate existing data and documents, including previous site investigations, Preliminary Assessment Reports, Site Inspection Reports, Hazardous Ranking System Scoring Package, photographic analysis reports, sediment dating reports and other data and documents available from EPA sources. Such information shall be used to determine if any additional data are needed for implementation of the RI/FS..

.1.1.4 Develop Technical Project Goals and Objectives

Respondents shall prepare data needs and data quality objectives (DQOs) for analytical sampling to be performed during the RI/FS project. The goals and objectives should be used to define the analytical methods and protocols, decontamination procedures and EPA reporting levels (e.g., I, II, III, IV) required.

(1) Develop Conceptual Site Model

Before the technical approach is finalized, Respondents and Respondents' contractor shall attend a scoping meeting with the RPM at EPA Region 6 offices. The purpose of the meeting will be to ensure that EPA and Respondents agree as to the approach to be taken in performing the RI/FS and incorporating the approach in the Work Plan.

(2) Identify Preliminary Project Requirements

(a) Data Needs and DQOs

(b) Objectives & Potential Alternatives

(c) Possible Treatability Studies

(d) Applicable or Relevant and Appropriate Requirements (ARARs) and/or Standards

(e) NEPA Requirements

(f) Other Regulatory Requirements/Restrictions

(g) Prepare Conceptual Exposure Pathway Analysis

.1.1.5 Respondents shall prepare and submit a Preliminary Site Characterization Report within 60 days following the effective date of the Unilateral Administrative Order for Remedial Investigation/Feasibility Study (UAO). The report should discuss the project requirements and evaluate existing information, identify potential technologies, data needs, preliminary ARARs and TBCs (To Be Considered) and should include the Conceptual Site Model.

RI/FS Work Plan Phase

.1.1.6 Develop Work Plan

Respondents shall present the general approach for the RI/FS at a Work Plan scoping meeting with the RPM at the Region 6 office.

(1) Develop Draft Work Plan

Respondents shall prepare and submit a draft RI/FS Work Plan within 90 days after EPA approval of the Site Characterization Report. See Attachment 2. The Work Plan shall include a comprehensive description of the additional data collection and evaluation of activities to be performed, if any, and the plans and specifications to be prepared. A comprehensive design management schedule for completion of each major activity and submittal shall also be included. The Work Plan shall be developed in conjunction with the Sampling and Analysis Plan (SAP) and Health and Safety Plan (HASP), although each plan shall be delivered under separate cover in accordance with the schedule in the RI/FS Work Plan.

(a) Develop Narrative

The Work Plan shall include the following:

(i) A statement of the problem and potential problem posed by the site and how the objectives of the RI/FS will address the problem.

(ii) A background summary setting forth (1) a brief description of the site, including the geographic location and the physiographic, hydrologic, geologic, demographic, ecological and cultural and natural resource features of the site, (2) a synopsis of the history of the site, including a summary of past disposal practices and a description of previous responses that have been performed by local, State, federal or private parties at the site and (3) a summary of the existing data, including physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the site.

(iii) Respondents' technical and management approach to each task to be performed, including a detailed description of each task, the assumptions used, the identification of any technical uncertainties (with a proposal for resolution of the uncertainties, the information needed for each task, any information to be produced during and at the conclusion of each task and the work products that will be submitted to EPA. Respondents shall identify any contractors it intends to retain to accomplish all or part of each task.

(iv) A schedule for specific dates for the start and completion of each required activity and submission of each deliverable required by this SOW. See Attachment 4 for format. The schedule shall also include information concerning the timing, initiation and completion of all critical path milestones for each activity and deliverable and the expected review time for EPA.

(b) Internal QA and Submission of Draft Work Plan.

(2) Prepare Final Work Plan

(a) Negotiation Meeting

Respondents and Respondents' contractor shall attend a Work Plan negotiation meeting at the Region 6 office.

(b) Revisions to Draft Work Plan. If Respondents determine that the planned RI/FS cannot meet an ARAR and/or Standard, Respondents

shall describe the issue and recommend technical solutions in a memo to the RPM. Respondents shall make revisions to the Work Plan as a result of EPA's comments and/or agreements reached after further negotiations on the issue identified.

(c) Internal QA and Submission of Final Work Plan

.1.2 Preparation of Site-Specific Plans

.1.2.1 Develop Site Management Plan

After EPA approval of the RI/FS Work Plan, Respondents shall prepare a Site Management Plan (SMP) that provides EPA with a written understanding of how access, security, contingency procedures, management responsibilities and sampling are to be handled.

(1) Develop Health and Safety Plan

Prepare a site-specific HASP that specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures and a contingency plan in accordance with 40 CFR § 300.150 and 29 CFR §§ 1910.120 1(1) and (1)(2). A task-specific HASP must also be prepared to address health and safety requirements for site visits.

(2) Develop Sampling and Analysis Plan (Chemical Data Acquisition Plan)

(a) Quality Assurance Project Plan

Respondents shall prepare a Quality Assurance Project Plan (QAPP) in accordance with EPA QA/R-5 (latest draft or revision). The QAPP shall describe the project objectives and organization, functional activities and quality assurance/quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan.

(b) Field Sampling Plan

Respondents shall prepare a Field Sampling Plan (FSP) that defines the sampling and data collection methods that shall be used for the project. The FSP shall include sampling objectives, sample locations and frequency, sampling equipment and procedures, sample handling and analysis, a breakdown of samples to be analyzed through other sources and the justification for those decisions. The FSP shall consider the use

of all existing data and shall justify the need for additional data whenever existing data will meet the same objective. The FSP shall be written so that a field sampling team unfamiliar with the site would be able to gather the samples and field information required. Respondents shall document any required changes to the FSP in a memorandum to the RPM. The FSP and QAPP can be combined into a single Sampling and Analysis Plan (SAP).

(c) Data Management Plan

Respondents shall prepare a Data Management Plan to address requirements for project management systems including tracking, storing and retrieving data. The plan shall also identify software to be used, minimum data requirements, data format and backup data management. The plan shall address both data management and document control for all RI/FS activities.

.1.2.2 Develop Pollution Control and Mitigation Plan

Respondents shall prepare a Pollution Control and Mitigation Plan that outlines the process, procedures and safeguards that will be used to ensure contaminants or pollutants are not released off-site during RI/FS implementation.

(1) Transportation and Disposal Plan (Waste Management Plan)

Respondents shall prepare a Transportation and Disposal Plan which outlines how wastes that are encountered during the RA will be managed and disposed of. Respondents shall specify the procedures that will be followed when wastes will be transported off-site for storage, treatment or disposal.

1.2.3 Develop Risk Assessment Plan.

Respondents shall prepare a Risk Assessment Plan to determine whether site contaminants of concern pose a current or potential risk to human health and the environment in the absence of any remedial action. The plan shall include all assumptions and methods required to perform a human health and ecological baseline risk assessment.

.1.3 Project Management

1.3.1 Prepare Periodic Status Reports

Respondents shall prepare Monthly Progress Reports.

.1.3.2 Meeting Participation and Routine Communications

Respondents shall attend project meetings, provide documentation of meeting results and contact the RPM by telephone and/or e-mail on a weekly basis to report the project status.

.1.4 Contract Procurement and Support Activities

.1.4.1 Identification and Procurement of contractors

Respondents shall procure and administer the necessary contracts that may include the following:

(1) Drilling

(2) Surveying

(3) Geophysical

(4) Site Preparation

(5) Analytical Services

(6) Waste Disposal

(7) Treatability Study

.1.4.2 Establish and Carry Out a QA Program for contracts

1.2 Community Relations Support

Community Involvement Phase

Note: special requirements for Superfund alternative sites.

Respondents shall provide community relations support to EPA throughout the RI/FS in accordance with *Community Relations in Superfund: A Handbook*, June 1988. Community relations shall include the following subtasks:

.2.1 Community Relations Plan (CRP)

Respondents shall address community relations requirements during the RI/FS. EPA will develop the CRP.

.2.1.1 Conduct Community Interviews

Respondents shall assist the RPM and the EPA Community Involvement Coordinator (CIC), as necessary, in conducting community interviews to identify community concerns associated with the RI/FS. Respondents shall assist the RPM and CIC in identifying key community members, establishing an interview schedule and summarizing results.

.2.2 Respondents shall assist and coordinate with the CIC and RPM in the preparation of a fact sheet that informs the public about activities to be expected during the RI, provisions for responding to emergency releases and spills and any potential inconveniences such as excess traffic and noise that may affect the community during the RI/FS. EPA anticipates that a fact sheet informing the community of the start of the RI/FS field activities, a fact sheet announcing the Proposed Plan (PP), a PP and a fact sheet announcing the Record Of Decision (ROD).

.2.3 Open Houses, Public Meetings and Availability Support

Respondents shall support and assist EPA with open houses, and public meetings, including assisting and coordinating with the CIC and RPM in the preparation of presentation materials and providing support as needed for open houses and public meetings. For estimate purposes, one open house and one public meeting in Baton Rouge are anticipated before the ROD is finalized. Assisting in the response to public comments on the Proposed Plan is an example of a required support activity before issuance of the ROD.

.2.3.1 Technical Support

Respondents shall provide technical support for community relations. This support may include preparing technical input to news releases, briefing materials, other community relations vehicles and assisting the RPM and CIC in coordinating with local agencies.

.2.3.2 Logistical and Presentation Support.

Respondents shall assist the RPM and CIC in preparing technical briefing materials and arranging for the logistical details for meetings.

.2.4 Maintain Information Repository

Respondents shall assist in maintaining a repository of information \related to the site-specific RI/FS activities, as described in Appendix A.8, page A-19, of *Community Relations in Superfund: A Handbook*, June 1988. Respondents should provide copies of all final documents to the local repository located in the Scotlandville Branch Library, 7373 Scenic Hwy., Baton Rouge, LA. See attachment 2 for quantity and distribution of draft and final deliverables.

.2.5 Proposed Plan Support

Requires preparing a draft PP (Microsoft Word format) in coordination with EPA and LDEQ. EPA will prepare the final PP.

2.6 Responsiveness Summary Support

Requires providing any additional information requested by EPA in responding to public comments.

.2.7 Respondents shall prepare and submit a TAP and funding for the TAG.

1.3 Data Acquisition

Data acquisition entails collecting environmental samples and information required to support the RI/FS. The preparation of data acquisition plans is set forth in Task 1.1, Project Planning. Data acquisition starts with EPA approval of the FSP and ends with the demobilization of field personnel and equipment from the site.

Respondents shall perform the following field activities or combination of activities for data acquisition in accordance with the EPA-approved FSP and QAPP (or SAP) developed in Task 1.1.

.3.1 Mobilization and Demobilization

Respondents shall provide the necessary personnel, equipment and materials for mobilization and demobilization to and from the site for the purpose of performing the sampling program under subtask 1.3.2, Field Investigation.

.3.1.1 Respondents shall Identify Field Support Equipment, Supplies and Facilities

.3.1.2 Mobilization.

Respondents shall mobilize and set up a field laboratory to facilitate rapid turnaround times for analytical results and identification of sample locations for subsequent sampling rounds.

(1) Site Preparation

(a) Demolition

(b) Clearing and Grubbing

(c) Perform Earthwork

Construct haul roads

(d) Construct roads and parking areas

(e) Install fencing, signs and site security

(2) Installation of Utilities

(a) Install Electrical Distribution

(b) Install Telephone and Communication System(s) as needed

(c) Install Water, Sewage and temporary sanitary facilities as needed

(3) Construction of Temporary Facilities

(a) Construct Decontamination Facilities

(b) Construct Sample and Derived Waste Storage Facility

(c) Construct Field Offices as needed

(d) Construct Mobile Laboratory as needed

(e) Construct Other Temporary Facilities if needed

3.1.3 Demobilization

Demobilize the field laboratory.

(1) Removal of Temporary Facilities

(2) Site Restoration

3.2 Field Investigation

Perform environmental sampling to include the following:

.3.2.1 Perform Site Reconnaissance.

Respondents shall perform site surveys including property, boundary, utility rights-of-way and topographic information. The surveys are to ensure the accuracy of existing information for the RI/FS.

(1) Ecological Resources Reconnaissance

(a) Land Survey

(d) Topographic Mapping

(e) Field Screening

3.2.2 Perform Geological Investigations (Soils and Sediments)

(1) Collect Surface Soil Samples

(2) Collect Subsurface Soil Samples

(3) Soil Boring, sediment coring and Permeability Sampling

(4) Collect Sediments Samples

3.2.3 Perform Air Investigations and monitoring as per HASP

(1) Sample Collection

(2) Air Monitoring Station

3.2.4 Perform Hydrogeological Investigations for Groundwater, as needed

(1) Perform Mobilization-conduct geophysics, as needed

(2) Collect Samples

(3) Collect Samples during drilling or coring (e.g., HydroPunch or Equivalent)

3.2.5 Conduct Hydrogeological Investigations for Surface Water, as needed

(1) Collect Samples

(2) Measure Surface-Water Elevation

3.2.6 Conduct Waste Investigation as needed

(1) Collect Samples (Gas, Liquid, Solid)

(2) Dispose of Derived Waste (Gas, Liquid, Solid)

3.2.7 Conduct Geophysical Investigation (all as needed)

(1) Surface Geophysical Activity

(2) Electromagnetics

(3) Ground-Penetrating Radar

(4) Seismic Refraction

(5) Resistivity

(6) Site Meteorology

(7) Cone Penetrometer Survey

(8) Remote Sensor Survey

(9) Sediment deposition studies

(10)Radiological Investigation

3.2.8 Conduct Ecological Investigation

(1) Wetland and Habitat Delineation

(2) Wildlife Observations

(3) Community Characterization

(4) Identification of Endangered Species

(5) Biota Sampling (fish, crawfish) and Population Studies

(6) Sediment toxicity studies.

3.2.9 Dispose of Investigation-Derived Waste

Respondents shall characterize and dispose of investigation-derived wastes in accordance with local, State and Federal regulations as specified in the FSP (see the Fact Sheet, *Guide to Management of Investigation-Derived Wastes*, 9345.3-03FS (January 1992)).

3.3 Prior to ecological field investigation

Perform a field verification of the ecological field sampling design to verify the availability of species to be sampled prior to field activities, efficiency of sampling techniques and required level of effort.

1.4 Sample Analysis

Respondents shall arrange for the analysis of environmental samples collected during the previous task. Respondents shall use private labs using test methods and deliverables under the approved quality assurance project plans.

Respondents shall perform the following activities or combination of activities to analyze test results:

.4.1 Screening-Type Laboratory Sample Analysis

4.1.1 Analyze Surface-Water Samples

(1) Organic

(2) Inorganic

4.1.2 Analyze Soil and Sediment Samples

(1) Organic

(2) Inorganic

4.1.3 Analyze Biota Samples

(1) Organic

(2) Inorganic

4.1.4 Analyze Bioassay Samples

.4.1.5 Perform Bioaccumulation Studies

4.2 Definite Analysis -Type Laboratory Sample Analysis

.4.2.1 Analyze Surface-Water Samples

(1) Organic

(2) Inorganic

4.2.2 Analyze Soil and Sediment Samples

(1) Organic

(2) Inorganic

4.2.3 Analyze Biota Samples

(1) Organic

(2) Inorganic

(3) Radiochemistry

4.2.4 Analyze Bioassay Samples

.4.2.5 Perform Bioaccumulation Studies

Note: The type of samples, screening or definite analysis, media, water, sediment, biota, are intended to illustrate potential approaches for meeting the RI/FS objectives. In summary, these include; characterization and extent of site contamination; measurement of human health and ecological risk at the site; evaluation of potential remedial alternatives. Based on the conceptual site model and the approved site investigation plan, sample analysis will be further defined in the site sampling and analysis plan.

1.5 Analytical Support and Data Validation

Respondents shall arrange for the validation of environmental samples collected during the previous task. The sample validation task begins with the completion of the field sampling program. This task ends with Respondents validating the analytical data received from the laboratory. Respondents shall perform appropriate data validation to ensure that the data are accurate and defensible. See paragraph 1.4.

Respondents shall perform the following activities or combination of activities to validate test results:

5.1 Prepare and Ship Environmental Samples

.5.1.1 Surface and Subsurface Soil Samples

.5.1.2 Surface-Water and Sediment Samples

.5.1.3 Biota Samples

.5.1.4 Other Types of Media Sampling and Screening

5.2 Coordinate with appropriate sample management personnel or laboratories

.5.3 Implement EPA-approved Laboratory QA Program or Laboratory QA Program

.5.4 Respondents shall provide sample management (chain of custody, sample retention, and data storage) and ensure the proper management of samples, accurate chain-of-custody procedures for sample tracking, protective sample packing techniques and proper sample-preservation techniques.

5.5 Validate Data

.5.5.1 Review Analysis Results Against Validation Criteria

.5.5.2 Provide Written Documentation of Validation Efforts

1.6 Data Evaluation

Respondents shall organize and evaluate existing data and data gathered during the previous tasks that will be used later in developing the RI/FS. Data evaluation should begin with the receipt of analytical data from the data acquisition task and end with the submittal of the Data Evaluation Summary Report. Respondents shall perform the following activities or combination of activities during the data evaluation effort:

.6.1 Data Usability Evaluation and Field QA/QC

6.2 Data Reduction, Tabulation, and Evaluation

Respondents shall evaluate, interpret and tabulate data in an appropriate presentation format for final data tables and design and set up an appropriate database for pertinent information collected that will be used during the RI/FS (as needed).

.6.2.1 Evaluate Geological Data (Soils and Sediments)

.6.2.2 Evaluate Air Data

.6.2.3 Evaluate Hydrogeological Data: Ground Water

.6.2.4 Evaluate Hydrogeological Data: Surface Water

.6.2.5 Evaluate Waste Data

.6.2.6 Evaluate Geophysical Data

.6.2.7 Evaluate Ecological Data

6.3 Modeling (as needed)

.6.3.1 Contaminant Fate and Transport

.6.3.2 Water Quality

.6.3.3 Ground Water

.6.3.4 Air

.6.3.5 Other Modeling

6.4 Respondents shall develop a draft Data Evaluation Report, evaluate, present the results in a Data Evaluation Summary Report and submit both reports to the RPM for review and approval. After review, Respondents shall attend a meeting with EPA to discuss data evaluation results and next steps. Respondents shall revise the draft and complete a Final Data Evaluation Report to be included in the RI/FS reports.

Note: Data evaluation determines if the data collected, the analysis completed and the results received meet the objectives of the RI/FS.

1.7 Risk Assessment

Human Health Risk Assessment Phase

The Risk Assessment will determine whether Site contaminants pose a current of potential risk to human health and the environment in the absence of any remedial action. Respondents shall address the contaminant identification, exposure assessment, toxicity assessment and risk characterization. The Risk Assessment will be used to determine whether remediation is necessary at the Site, provide justification for performing remedial action and determine what exposure pathways need to be remediated (if any).

.7.1 Human Health Risk Assessment.

Respondents shall evaluate and assess the risk to human health posed by Site contaminants. EPA has made a risk assessment over the entire swamp and the different habitats. Based on the methodology used in the EPA report, Respondents shall address the current risk to the Lake and the swamp portions immediately north and south of the Lake under current conditions (current sampling data) and considering the defined extent of contamination. The EPA Risk Assessment Guidance for Superfund (RAGS) Part D for Standard Tables shall be used for reporting.

7.1.1 Draft Human Health Risk Assessment Report.

Respondents shall prepare a draft Human Health Risk Assessment Report that addresses the following:

(1) Hazard Identification (sources)

Respondents shall review available information on the hazardous substances present at the Site and identify the major contaminants of concern.

(2) Dose-Response Assessment.

Contaminants of concern should be selected based on their intrinsic toxicological properties.

(3) Prepare Conceptual Exposure/Pathway Analysis

Critical exposure pathways (e.g., drinking water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.

(4) Characterization of Site and Potential Receptors

Respondents shall identify and characterize human populations in the exposure pathways.

(5) Exposure Assessment

The exposure assessment shall identify the magnitude of actual or potential human exposures, the frequency and duration of these exposures and the routes by which receptors are exposed. It shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, Respondents shall develop reasonable maximum estimates of exposure for both current land use conditions and potential future land use conditions at the Site.

(6) Risk Characterization

During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect human health.

(7) Identification of Limitations/Uncertainties

Respondents shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.

(8) Site Conceptual Model

Respondents shall develop a conceptual model of the Site, based on contaminant identification, exposure assessment, toxicity assessment and risk characterization.

7.1.2 Final Human Health Risk Assessment Report

After the draft Human Health Risk Assessment Report has been reviewed and commented on by EPA, Respondents shall incorporate EPA comments and submit the final Human Health Risk Assessment Report.

Ecological Risk Assessment Phase

.7.2 Baseline Ecological Risk Assessment

Respondents shall evaluate and assess the risk to the environment posed by Site contaminants. EPA has performed a Screening Level Ecological Risk Assessment and a broad baseline ecological risk assessment over the entire swamp and the different habitats. Based on the methodology used in the EPA report, Respondents will address the current risk to the Lake and the swamp portions immediately north and south of the Lake under current conditions (current sampling data) and considering the defined extent of contamination.

7.2.1 Draft Baseline Ecological Risk Assessment Report

Respondent shall prepare a draft Ecological Risk Assessment Report that addresses the following:

(1) Hazard Identification (sources)

Respondents shall review available information regarding the hazardous substances present at the site and identify the major contaminants of concern.

(2) Dose-Response Assessment

Contaminants of concern should be selected based on their intrinsic toxicological properties.

(3) Prepare Conceptual Exposure/Pathway Analysis

Critical exposure pathways (e.g., surface water) shall be identified and analyzed. The proximity of contaminants to exposure pathways and their potential to migrate into critical exposure pathways shall be assessed.

(4) Characterization of Site and Potential Receptors

Respondents shall identify and characterize environmental exposure pathways.

(5) Select Chemicals, Indicator Species, and End Points

In preparing the assessment, Respondents shall select representative chemicals, indicator species (species that are especially sensitive to environmental contaminants) and end points on which to concentrate.

(6) Exposure Assessment

The exposure assessment will identify the magnitude of actual or environmental exposures, the frequency and duration of these exposures and the routes by which receptors are exposed. The exposure assessment shall include an evaluation of the likelihood of such exposures occurring and shall provide the basis for the development of acceptable exposure levels. In developing the exposure assessment, Respondents shall develop reasonable, maximum estimates of exposure for both current land use conditions and potential land use conditions at the Site.

(7) Toxicity Assessment/Ecological Effects Assessment

The Toxicity and Ecological Effects Assessment shall address the types of adverse environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects and the related uncertainties for contaminant toxicity (e.g., weight of evidence for a chemical's carcinogenicity).

(8) Risk Characterization

During risk characterization, chemical-specific toxicity information, combined with quantitative and qualitative information from the exposure assessment, shall be compared to measured levels of contaminant exposure levels and the levels predicted through environmental fate and transport modeling. These comparisons shall determine whether concentrations of contaminants at or near the Site are affecting or could potentially affect the environment.

(9) Identification of Limitations/Uncertainties

Respondents shall identify critical assumptions (e.g., background concentrations and conditions) and uncertainties in the report.

(10) Site Conceptual Model

Based on contaminant identification, exposure assessment, toxicity assessment and risk characterization, Respondents shall develop a conceptual model of the Site.

7.2.2 Final Baseline Ecological Risk Assessment Report

After the draft Ecological Risk Assessment Report has been reviewed and commented on by EPA, Respondents shall incorporate EPA comments and submit the final Ecological Risk Assessment Report.

Feasibility Study (FS) Phase-Treatability Study, if required

1.8 Treatability Study and Pilot Testing (activities Respondents may be directed to perform)

Technologies that may be suitable to the Site should be identified as early as possible to determine whether there is a need to conduct treatability studies to better estimate costs and performance capabilities. At present, it is unknown whether a bench test or pilot study will be conducted. Should it be determined that a bench test or pilot study is necessary, Respondent shall submit a testing plan identifying the types and goals of the treatability study. The treatability study shall determine the suitability of remedial technologies to site conditions and problems.

The three levels of treatability studies are laboratory screening, bench-scale testing and pilot-scale testing. The laboratory screening is used to establish the validity of a technology to treat waste and is normally conducted during the FS. Bench-scale testing is used to identify the performance of the technology specific to a type of waste for an operable unit. Bench-scale tests are often performed during the FS. Pilot-scale testing is used to provide quantitative performance, cost and design information for remediation and is typically performed during RD (see the Fact Sheet, *Guide for Conducting Treatability Studies Under CERCLA*, November, 1993).

In accordance with the management schedule established in the approved RI/FS Work Plan, Respondents shall perform the following activities:

.8.1 Literature Search

.8.2 Treatability and Pilot Work Plan (if applicable)

Respondents shall prepare and submit the Treatability Study Work plan to the RPM for review and approval. The Treatability Study Work Plan shall describe the technology to be tested, test objectives, test equipment or systems, experimental procedures, treatability conditions to be tested, measurements of performance,

analytical methods, data management and analysis, health and safety procedures and residual waste management. The DQOs for the treatability study shall also be documented.

The Treatability Study Work Plan shall also describe pilot plant installation and startup, pilot plant operation and maintenance procedures and operating conditions to be tested. If testing is to be performed off-site, permitting requirements shall be addressed. A schedule for performing the treatability study shall be included with specific dates for each task and subtask, including EPA review periods. Key milestones that should have completion dates specified include, but are not limited to, the procurement of contractors and the completion of sample collection, the performance period, sample analysis and report preparation.

The Treatability Study Work Plan shall describe in detail the treatment process and how the proposed vendor or technology will meet the performance standards for the Site. The Treatability Study Work Plan shall address how Respondents will meet all discharge or disposal requirements for any and all treated material, air, water, and expected effluents. The Work Plan shall also explain the proposed final treatment and disposal of all material generated by the proposed treatment system.

Respondents shall perform Treatability Studies, if and as necessary, to determine whether the remediation technology or vendor of the technology can achieve the performance standards. Treatability studies shall be performed as described in the EPA-approved Final Treatability Study Work Plan.

The following activities may be required during the performance of the treatability study and pilot testing:

.8.3 Bench Test

.8.3.1 Test Facility and Equipment

Respondents shall procure test facility and equipment, including the procurement procedures necessary to acquire the vendor, equipment, or facility to execute the tests.

8.3.2 Provide Vendor and Analytical Service

.8.3.3 Test and Operate Equipment. Respondents shall test equipment to ensure operation, then start up and operate equipment.

.8.3.4 Retrieve Sample for Testing

Respondents shall obtain samples for testing as specified in the Treatability Work Plan.

.8.3.5 Perform Laboratory Analysis

Respondents shall establish a field laboratory to facilitate fast-turnaround analysis of test samples or, if necessary, shall procure outside laboratory services to analyze the test samples and evaluate test results.

.8.3.6 Characterize and Dispose of Residuals

.8.4 Pilot-Scale Test

.8.4.1 Procure Test Facility and Equipment.

Respondents shall procure test facility and equipment, including the procurement procedures necessary to acquire the vendor, equipment or facility to execute the tests.

.8.4.2 Provide Vendor and Analytical Service.

.8.4.3 Test and Operate Equipment

Respondents shall test equipment to ensure operation, then start up and operate equipment.

8.4.4 Retrieve Sample for Testing

Respondents shall obtain samples for testing as specified in the Treatability Work Plan.

8.4.5 Perform Laboratory Analysis

Respondents shall establish a field laboratory to facilitate fast-turnaround analysis of test samples or, if necessary, shall procure outside laboratory services to analyze the test samples and evaluate test results.

8.4.6 Characterize and Dispose of Residuals

.8.5 Field Test

.8.5.1 Procure Test Facility and Equipment

Respondents shall procure test facility and equipment, including the procurement procedures necessary to acquire the vendor, equipment or facility to execute the tests.

.8.5.2 Provide Vendor and Analytical Service

.8.5.3 Test and Operate Equipment

Respondents shall test equipment to ensure operation and then start up and operate equipment.

.8.5.4 Retrieve Sample for Testing

Respondents shall obtain samples for testing as specified in the Treatability Work Plan.

.8.5.5 Perform Laboratory Analysis

Respondents shall establish a field laboratory to facilitate fast-turnaround analysis of test samples or, if necessary, shall procure outside laboratory services to analyze the test samples and evaluate test results.

8.5.6 Characterize and Dispose of Residuals

.8.6 Develop Treatability Study Report.

Thirty days after completion of the Treatability Study, Respondents shall prepare and submit the draft Treatability Study Evaluation Report which shall:

(1) describe performance of the technology,

(2) describe the performance of the technology or vendor, compared with the performance standards established for the Site

(3) evaluate the treatment technology's effectiveness, implementability, cost and final results compared with the predicted results and

(4) evaluate the full-scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation. After the RPM's review Respondants shall attend a meeting with EPA to discuss results and next steps. Respondants shall complete and submit final Treatability Study Evaluation Report.

1.9 Remedial Investigation Report

Respondents shall develop and deliver a RI report which accurately establishes the Site characteristics such as media contaminated, extent of contamination and the physical boundaries of the contamination. Pursuant to this objective, Respondents shall obtain only the minimally essential amount of detailed data necessary to determine the key contaminants movement and extent of contamination. The key contaminants must be selected based on persistence and mobility in the environment and the degree of hazard. The key contaminants identified in the RI shall be evaluated for receptor exposure and an estimate of the key contaminants level reaching human or environmental receptors must be made. Respondents shall use existing standards and guidelines, such as drinking-water standards, water-quality criteria and other criteria accepted by EPA as appropriate for the situation, may be used to evaluate effects on human receptors which may be exposed to key contaminants above appropriate standards or guidelines.

.9.1 Draft RI Report.

In accordance with the schedule developed in the RI/FS work plan, Respondents shall submit a draft RI Report which includes the following.

.9.1.1 Site Background

Respondents shall assemble and review available facts concerning the regional conditions and conditions specific to the Site.

.9.1.2 Investigation (as needed)

(1) Field Investigation & Technical Approach

(2) Chemical Analysis & Analytical Methods

(3) Field Methodologies

(a) Biological

(b) Surface Water

(c) Sediment

(d) Soil Boring

(e) Soil Sampling

(f) Monitoring Well Installation

(g) Groundwater Sampling

(h) Hydrogeological Assessment

(i) Air Sampling

.9.1.3 Site Characteristics

(1) Geology

(2) Hydrogeology

(3) Meteorology

(4) Demographics and Land Use

(5) Ecological Assessment

.9.1.4 Nature and Extent of Contamination

(1) Contaminant Sources

(2) Contaminant Distribution and Trends

.9.1.5 Fate and Transport

(1) Contaminant Characteristics

(2) Transport Processes

(3) Contaminant Migration Trends

.9.1.6 Summary and Conclusions

Note: A suggested RI Report Format is presented as Table 3-13 of the EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER Directive 9355.3-01, October 1988.

.9.2 Final RI Report. After EPA review of the draft RI Report, Respondents shall incorporate EPA comments and submit the final RI Report.

Feasibility Study (FS) Phase

1.10 Remedial Alternatives Screening

Respondents shall investigate only those hazardous waste management alternatives that will remediate or control contaminated media (soil, surface water, ground water, sediments) remaining at the Site, as deemed necessary in the RI, to provide adequate protection of human health and the environment. The potential alternatives should encompass, as appropriate, (1) a range of alternatives in which treatment is used to reduce the toxicity, mobility or volume of wastes but vary in the degree to which long-term management of residuals or untreated waste is required, (2) one or more alternatives involving containment with little or no treatment and (3) a no-action alternative. Alternatives that involve minimal efforts to reduce potential exposures (e.g., site fencing, deed restrictions) should be presented as "limited action" alternatives.

.10.1 Prepare Draft Technical Memorandum.

Respondents shall prepare a draft Technical Memorandum presenting the potential alternatives and including the following information:

.10.1.1 Establish Remedial Action Objectives

Respondents shall identify Site-specific remedial action objectives which should be developed to protect human health and the environment. The objectives should specify the contaminants and media of concern, the exposure routes and receptors and an acceptable contaminant level or range of levels for each exposure route (i.e., preliminary remediation goals).

.10.1.2 Establish General Response Actions

Respondents shall develop general response actions for each medium of interest by defining contaminant, treatment, excavation, pumping or other actions, singly or in combination, to satisfy remedial action objectives. The response actions should take into account requirements for protectiveness as identified in the remedial action objectives and the chemical and physical characteristics of the Site.

10.1.3 Identify & Screen Applicable Remedial Technologies

Respondents shall identify and screen technologies based on the developed general response actions. Hazardous waste treatment technologies should be identified and screened to ensure that only those technologies applicable to the contaminants present, their physical matrix and other Site characteristics will be considered. This screening will be based primarily on the capability of a technology to effectively address the contaminants at the Site but will also take into account implementability and cost. Respondents will select

representative process options, as appropriate, to carry forward into alternative development. Respondents will identify the need for treatability testing for those technologies that are probable candidates for consideration during the detailed analysis.

10.1.4 Develop Remedial Alternatives in accordance with the NCP.

10.1.5 Screen Remedial Alternatives for Effectiveness, Implementability and Cost

Respondents shall screen alternatives to identify the potential technologies or process options that will be combined into media-specific or Site-wide alternatives. The developed alternatives shall be defined with respect to size and configuration of the representative process options, time for remediation, rates of flow or treatment, spatial requirements, distances for disposal and required permits, imposed limitations and other factors necessary to evaluate the alternatives. If many distinct, viable options are available and developed, Respondents will screen the alternatives that which undergo the detailed analysis to provide the most promising process options. The alternatives should be screened on a general basis with respect to their effectiveness, implementability and cost.

.10.2 Prepare Final Technical Memorandum

After EPA reviews the draft Technical Memorandum Respondents will incorporate EPA's comments and submit the final Technical Memorandum.

1.11 Remedial Alternatives Evaluation

Respondents will present a detailed evaluation of alternatives, including the following:

.11.1 Remedial Alternatives Evaluation.

The evaluation shall include (1) a technical description of each alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative and (2) a discussion that profiles the performance of each alternative with respect to each of the evaluation criteria. Respondents shall provide a table summarizing the results of this analysis. Once the individual analysis is complete, the alternatives will be compared and contrasted to one another with respect to each of the evaluation criteria.

1.12 FS Report

Respondents shall develop a FS report consisting of a detailed analysis of alternatives and cost-effectiveness analysis in accordance with 40 CFR § 300.68(h)(3)(i)(2). The report shall contain (1) a summary of alternative remedial actions in accordance with 40 CFR § 300.68 (h)(3)(i)(2)(A), (2) a Cost Analysis in accordance with 40 CFR

§ 300.68(h)(3)(i)(2)(B); (3) an institutional analysis in accordance with 40 CFR § 300.68(h)(3)(i)(2)(C), (4) a public health analysis in accordance with 40 CFR § 300.68(h)(3)(i)(2)(D) and (5) an environmental analysis in accordance with 40 CFR § 300.68(h)(3)(i)(2)(E).

.12.1 Draft FS Report

Respondents shall prepare a draft FS Report and submit the report to EPA according to the schedule in the RI/FS work plan. The FS Report shall include the following:

.12.1.1 Summary of the Feasibility Study Objectives

.12.1.2 Summary of Remedial Objectives

.12.1.3 Description of the General Response Action

.12.1.4 Identification and screening of Remedial Technologies

.12.1.5 Description of the Remedial Alternatives

.12.1.6 Detailed Analysis of Remedial Alternatives

Respondents shall describe the technical feasibility considerations and include a discussion of any problems that may prevent a remedial alternative from mitigating Site problems, Site characteristics from the RI should be considered when discussing the technical feasibility of an alternative. Specific factors to be addressed are reliability (operation over time), safety, operation and maintenance, ease with which the alternative can be implemented and time needed for implementation.

.12.1.7 Summary and Conclusions

Note: A suggested FS Report Format is presented as Table 6-5 of the EPA Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, OSWER Directive 9355.3-01, October 1988.

.12.2 Prepare Final FS Report

After EPA review of the draft FS Report, Respondents will incorporate EPA's comments and submit the final FS Report.

1.13 Post RI/FS Support

Record of Decision Phase

After approval of the Final FS by EPA, Respondents shall prepare and submit to EPA a Draft Proposed Plan (PP) Report In preparing the PP Respondents shall use EPA's Guide for Preparing "A Guide to Preparing Superfund Proposed Plans, Records of Decision and Other Remedy Selection Decision Documents", EPA 540-R-98-031, July 1999. EPA will complete the Final Proposed Plan and conduct community relation activities with Respondents' support. EPA will complete the Administrative Record (AR) and the Record of Decision (ROD).

This task consists of support required for preparation of the ROD for the site. Respondents shall perform the following support activities:

.13.1 Attend Public Meetings, Briefings, & Technical Meetings with PRPs.

.13.2 Prepare Presentation Materials.

.13.3 Provide Technical Assistance (if needed) - Responsiveness Summary

.13.4 Provide Technical Assistance (if needed) - Proposed Plan & ROD.

.13.5 Prepare Feasibility Study Addendum.

Attachment 1
Summary of Major Submittals for the RI/FS
Devil's Swamp Lake

DELIVERABLES/MEETINGS	SCHEDULE
Initial Scoping and Planning Phase for RI/FS	
1. Draft and Final Preliminary Site Characterization Report Includes: Evaluation of Existing Information Draft and Final Conceptual Site Model Identification of Potential Technologies Identification of RI/FS Data Needs Preliminary List of ARARS and TBCs	Draft report is due 60 days after effective date of UAO. Final report is due within 30 days after receipt of EPA comments.
RI/FS Work Plan Phase	
2. Draft and Final RI/FS Work Plan Includes: - Project Management Plan - Data Management Plan - Draft and Final Sampling and Analysis Plan for Remedial Investigation - Draft and Final Quality Assurance Project Plan - Draft and Final Health and Safety Plan - Draft and Final Study Design and Data Quality Objectives (DQO)	Draft RI/FS Work Plan due 90 days after EPA approval of the Preliminary Site Characterization Report. Final report is due within 30 days after receipt of EPA comments.
Community Involvement Phase	
3. Draft and Final Technical Assistance Plan (TAP)	Draft report is due 30 days following effective date of UAO. Final report is due within 15 days after receipt of EPA comments.
Human Health Risk Assessment (HHRA) Phase	
4. Draft and Final Baseline Human Health Risk Assessment	Draft due as specified in the Final RI/FS Work Plan. The final report is due within 30 days after receipt of EPA comments.
Ecological Risk Assessment (ERA) Phase	

DELIVERABLES/MEETINGS	SCHEDULE
5. Draft, and Final Screening Level Ecological Risk Assessment Report (Optional, may go directly to Baseline Ecological Risk Assessment)	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
6. Draft, and Final Baseline Ecological Risk Assessment Problem Formulation Report.	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
7. Draft and Final Baseline Ecological Risk Assessment Work Plan Includes: Assessment Endpoints, Measurement Endpoints, proposed data interpretation and proposed analysis	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments. .
8. Draft and final Field Sampling and Analysis Plan (FSAP) for ecological risk assessment.	Draft report is due 30 days following EPA approval of the Ecological Risk Assessment Work Plan. Final report is due within 15 days after receipt of EPA comments.
9. Draft and final Formal Verification of Field Sampling Design	Draft report is due 30 days following EPA approval of the Ecological Field Sampling and Analysis Plan. Final report is due within 15 days after receipt of EPA comments.
10. Draft and final Field Activities Report	Draft report is due 20 days after field activities. Final report is due within 15 days after receipt of EPA comments.
11. Draft, and Final Baseline Ecological Risk Assessment Report	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
12. Analytical Data Summary	Submitted as needed, for any additional data not included in the standard reports or not included in Monthly Progress Reports.
Remedial Investigation (RI) Phase	
13.Draft and Final Remedial Investigation Report	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
Feasibility Study (FS) Phase	

DELIVERABLES/MEETINGS	SCHEDULE
14. Draft and final Treatability Study Work Plan and report, Sampling and Analysis Plan, and Health and Safety Plan (if required)	If required, Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
15. Draft and final Technical Memorandum on Development of alternatives and Preliminary Screening of Remedial Alternatives Evaluation	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
16. Draft and Final Feasibility Study Report	Draft due as specified in the Final RI/FS Work Plan. Final report is due within 30 days after receipt of EPA comments.
17. Draft Proposed Plan	After approval of Final FS by EPA.
Record of Decision (ROD) Phase	
EPA finalizes the Proposed Plan, obtains State concurrence with Proposed Plan, prepares the Administrative Record, prepares fact sheets, conducts a public meeting, establishes a Public Comment Period, and Prepares Responsiveness Summary	These are activities conducted by EPA.
Draft and Final Record of Decision	These are activities conducted by EPA. The final ROD signals completion of the RI/FS.
Reporting Phase	
12. Monthly Progress Reports	Monthly. Due by the tenth day of the following month.

EPA may grant requests for extensions of time submitted by Respondents as necessary.

EPA will coordinate review and approval of documents with the LDEQ within the estimated timeframes.

If the remedial investigation reveals contamination in specific, identifiable areas of concern that may present an imminent and substantial endangerment to human health or the environment, Respondents may propose or EPA may require that an interim response action be undertaken to address the threat. Respondents may propose, subject to EPA

review, comment and approval with modifications if necessary, interim response actions that, if implemented, will protect human health and the environment and may contribute to the effectiveness of the remedial action eventually selected for this Site.

EPA may determine that a time critical or non-time critical interim response is appropriate to eliminate an imminent and substantial threat to human health or the environment. If approved by EPA, Respondents may perform the interim response action. Respondents must follow all applicable guidance pertaining to response actions. The schedule of the RI/FS will be modified in consequence of the performance of any response actions. Respondents shall submit an updated schedule for the remaining RI/FS activities for EPA approval.

Either course of action will produce the basis for EPA's preparation of a ROD in accordance with CERCLA and EPA guidance. Regardless of the course taken to evaluate the site, Respondents are responsible for the development of an RI, FS, Human Health Risk Assessment and Ecological Risk Assessment to support the final ROD. The scope of efforts to conduct and document the RI, FS, Human Health Risk Assessment and Ecological Risk Assessment will be presented in the RI/FS Work Plan.

Attachment 2
Quantity and Distribution of Draft and Final Deliverables
for Remedial Investigation/Feasibility Study

Recipient	Quantity	Document Description
EPA RPM	1	one paper copy of every draft document, including in the report a CD with an electronic copy (pdf format).
	1	one paper copy of every final document, including in the report a CD with an electronic copy (pdf format).
EPA Oversight Contractor	1	one paper copy of every draft document, including in the report a CD with an electronic copy (pdf format).
	1	one paper copy of every final document, including in the report a CD with an electronic copy (pdf format).
Louisiana Department of Environmental Quality	1	one paper copy of every draft document, including in the report a CD with an electronic copy (pdf format).
	1	one paper copy of every final document, including in the report a CD with an electronic copy (pdf format).
EPA selected Technical Advisory Group	1	one paper copy of every draft document, including in the report a CD with an electronic copy (pdf format).
	1	one paper copy of every final document, including in the report a CD with an electronic copy (pdf format).
local site repository Scotlandville Branch Library 7373 Scenic Highway Baton Rouge, LA 70807	1	one paper copy of every final document, including in the report a CD with an electronic copy (pdf format).

To facilitate the transmittal and submittal of electronic documents and files, Respondents may submit electronic copies (pdf format) via E-mail and/or using an Internet File Transfer Protocol (FTP) site.

Attachment 3
Regulations and Guidance Documents

The following list includes many, but not all, of the regulations and guidance documents which

apply to the RI/FS process:

1. National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300

2. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01

3. "Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01

4. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3

5. "Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents," U.S. EPA, Office of Solid Waste and Emergency Response, EPA 540-R-98-031, July 1999, OSWER Directive No. 9200.1-23P

6. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14

7. "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R

8. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements," U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05

9. "CERCLA Compliance with Other Laws Manual," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (draft), OSWER Directive No. 9234.1-01 and -02

10. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites," U.S. EPA, Office of Emergency and Remedial Response, (draft), OSWER Directive No. 9283.1-2

11. "Draft Guidance on Preparing Superfund Decision Documents," U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02

12. "Performance of Risk Assessments in Remedial Investigation/Feasibility Studies (RI/FSs) Conducted by Potentially Responsible Parties (PRPs)," August 28, 1990, OSWER Directive No. 9835.15

13. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30

14. OSHA Regulations at 29 C.F.R. 1910.120

15. "Final Guidance on Administrative Records for Selecting CERCLA Response Actions," U.S. EPA, Office of Waste Programs Enforcement, December 3, 1990, OSWER Directive No. 9833.3A

16. "Community Relations in Superfund: A Handbook," U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0#3B

17. "Community Relations During Enforcement Activities And Development of the Administrative Record," U.S. EPA, Office of Programs Enforcement, November 1988, OSWER Directive No. 9836.0-1A

18. EPA 1997. "Ecological Risk Assessment Guidance for Superfund, Process for Designing and Conducting Ecological Risk Assessments." Office of Emergency and Remedial Response. EPA/540-R-97-006. June 5, 1997

19. U.S. Environmental Protection Agency (EPA) 1987a. "Data Quality Objectives for Remedial Response Activities." Office of Emergency and Remedial Response and Office of Waste Programs Enforcement. EPA/540/G-87/003. OSWER Directive No. 9335.0-7b. March 1987

20. EPA 1991a. "Human Health Evaluation Manual, Supplemental Guidance: Standard Default Exposure Factors." Office of Emergency and Remedial Response. OSWER Directive No. 9235.6-03. March 1991

21. "Risk Assessment Guidance for Superfund - Volume I Human Health Evaluation Manual (Part A)," December 1989, EPA/540/1-89/002

22. EPA 1991b. "Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual (Part B), Development of Risk-Based Preliminary Remediating Goals." Office of Emergency and Remedial Response. OSWER Directive No. 9285.7-01B. December 1991

23. EPA 1991c. "Risk Assessment Guidance for Superfund: Volume I, Human Health Evaluation Manual (Part C), Risk Evaluation of Remedial Alternatives." Office of Emergency and Remedial Response. OSWER Directive No. 9285.7-01C. 1991

24. EPA 1992a. "Guidance for Data Useability in Risk Assessment." Office of Emergency and Remedial Response. OSWER Directive No. 9285.7-09A. April 1992 (and Memorandum from Henry L. Longest dated June 2, 1992)

25. "Risk Assessment Guidance for Superfund. Volume I: Human Health Evaluation Manual. Supplemental Guidance. Dermal Risk Assessment." Interim Guidance, 1998

26. "Risk Assessment Guidance for Superfund - Volume II Environmental Evaluation Manual," March 1989, EPA/540/1-89/001

27. EPA 1992b. "Supplemental Guidance to RAGS: Calculating the Concentration Term." Office of Emergency and Remedial Response. OSWER Directive No. 9285.7-081. May 1992

28. EPA 1993a. "Data Quality Objectives Process for Superfund." Office of Solid Waste and Emergency Response. EPA/540-R-93-071. September 1993

29. EPA 1998a. "Risk Assessment Guidance for Superfund, Volume 1 - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments). Interim. Process for Designing and Conducting Ecological Risk Assessments." Office of Solid Waste and Emergency Response. EPA/540-R-97-033. January 1998. Publication 9285.7-47, Final, December 2001.

30. EPA 1998b. "EPA Guidance for Quality Assurance Project Plans." Office of Research and Development. EPA QA/G-5. EPA/600/R-98/018. February 1998.

31. EPA 2001. "EPA Requirements for Quality Assurance Project Plans." Office of Environmental Information. EPA QA/R-5. EPA/240/B-01/003. March 2001.

32. "Health and Safety Requirements of Employees Employed in Field Activities," U.S. EPA, Office of Emergency Response, July 12, 1981, EPA Order No. 1440.2.

33. "Exposure Factors Handbook", EPA, 1997.

34. Integrated Risk Information System (IRIS), 2000.

35. "Health Effects Assessment Summary Tables (HEAST), "U.S. EPA, Office of Solid Waste and Emergency Response, 1997, EPA/540/R-95/036.

36. "Guidance for Conducting Non-Time-Critical Removal Actions Under CERCLA", U.S. EPA, Office of Emergency and Remedial Response, August 1993, OSWER Directive No. 9360.0-32.

37. Guide for ConductingTreatability Studies Under CERCLA, Final. U.S. EPA, Office of Solid Waste and Emergency Response, EPA/540/R-92/071a, October 1992.

38. Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.

39. Contaminated Sediment Remediation Guidance for Hazardous Waste Sites, U.S. EPA, Office of Solid Waste and Emergency Response, EPA-540-R-05-012, OSWER 9355.0-85, December, 2005.

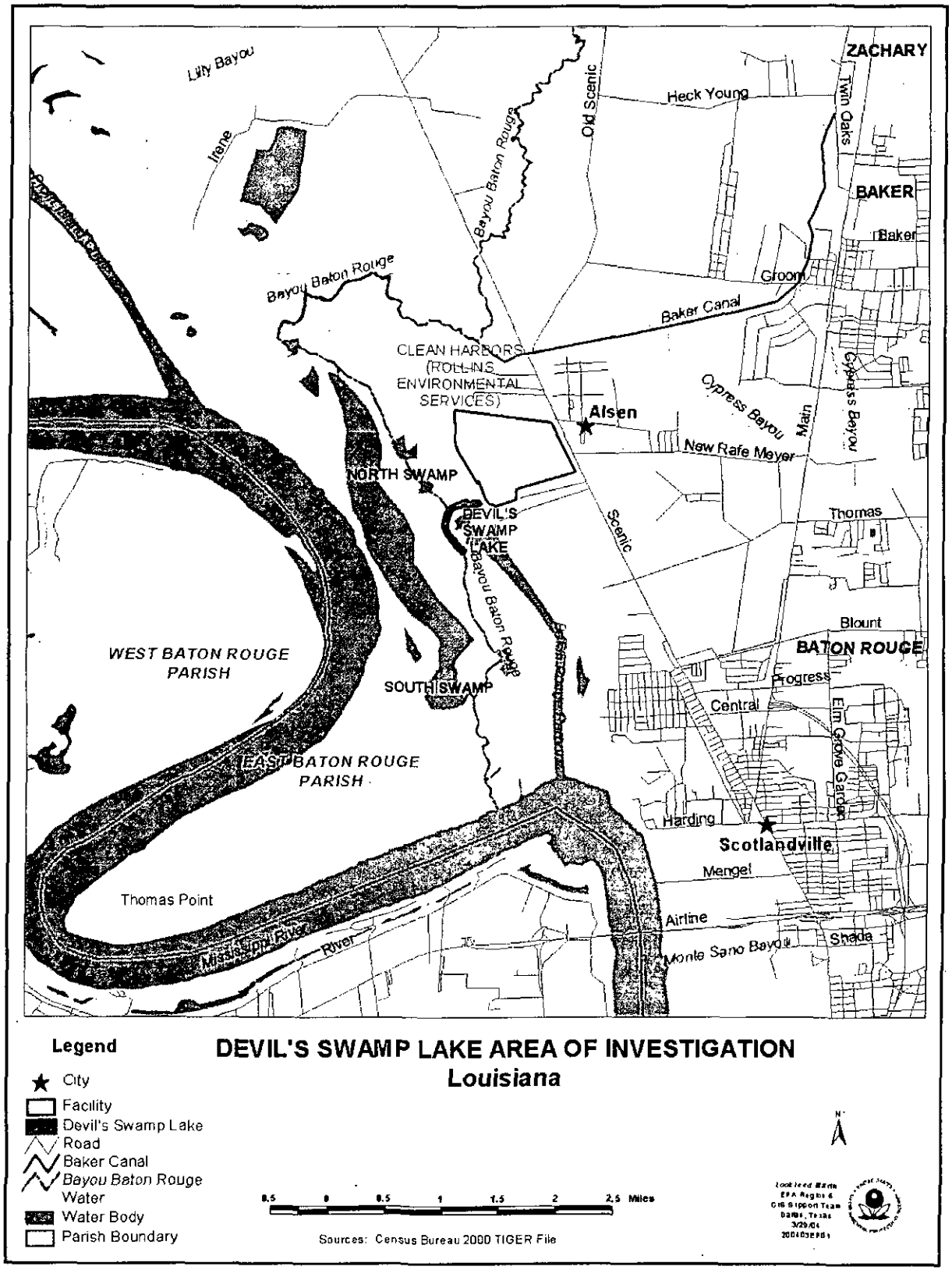
40. Revised Policy on Performance of Risk Assessments During Remedial Investigation/Feasibility Studies (RI/FS) Conducted by Potentially Responsible Parties, U.S. EPA, Office of Solid Waste and Emergency Response, OSWER directive No. 9835.15c, Jan 1996.

41. Technical Guide - Monitored Natural Attenuation at Contaminated Sediment Sites, U.S. Department of Defense (DoD), Environmental Security Technology Certification Program (ESTCP), May 2009. Available at Superfund Sediments web page at http://www.epa.gov/superfund/health/conmedia/sediment/index.htm

ATTACHMENT 4

TRANSMITTAL OF DOCUMENTS FOR ACCEPTANCE BY EPA		DATE:	TRANSMITTAL NO.
TO: Bartolome J. Canellas (6SF-RL) Remedial Project Manager US Environmental Protection Agency, Region 6 1445 Ross Avenue, Dallas TX 75202	FROM:		☐ New Transmittal ☐ Resubmittal of Transmittal No. _____
SUBTASK NO.	DELIVERABLE	NO. OF COPIES	REMARKS
ACCEPTANCE ACTION			
DOCUMENTS FOUND ACCEPTABLE	NAME/TITLE/SIGNATURE OF REVIEWER DATE		

Appendix B


Lily Bayou
Irene
Bayou Baton Rouge
Old Scenic
Heck Young
ZACHARY
Twin Oaks
BAKER
Baker
Groom
Bayou Baton Rouge
Baker Canal
CLEAN HARBORS (ROLLINS ENVIRONMENTAL SERVICES)
Alsen
Cypress Bayou
Main
Cypress Bayou
New Rafe Meyer
NORTH SWAMP
DEVIL'S SWAMP LAKE
Bayou Baton Rouge
Scenic
Thomas
Blount
BATON ROUGE
WEST BATON ROUGE PARISH
SOUTH SWAMP
Progress
Central
Elm Grove Garden
EAST BATON ROUGE PARISH
Harding
Scotlandville
Mengel
Thomas Point
Airline
Shade
Monte Sano Bayou
Mississippi River
River
Legend
City
Facility
Devil's Swamp Lake
Road
Baker Canal
Bayou Baton Rouge
Water
Water Body
Parish Boundary
DEVIL'S SWAMP LAKE AREA OF INVESTIGATION
Louisiana
N
0.5 0 0.5 1 1.5 2 2.5 Miles
Sources: Census Bureau 2000 TIGER File